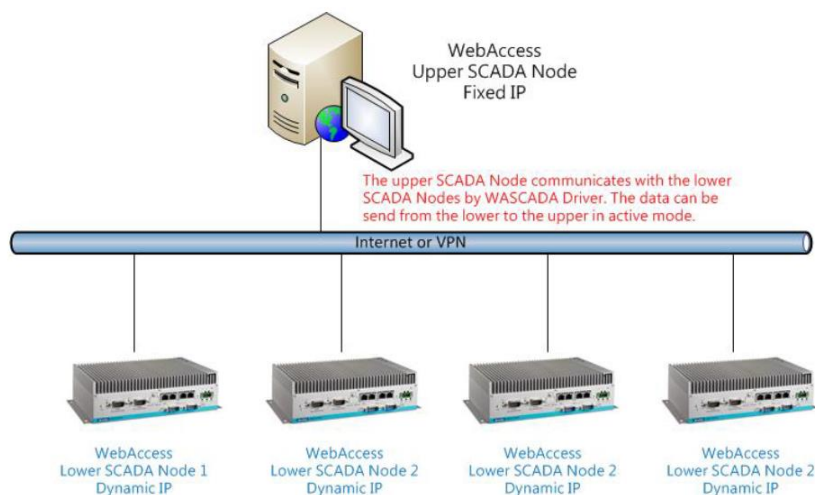


Advantech AE Technical Share Document

Date	2016 / 12 / 8	SR#	1-2755147681
Category	■ FAQ □ SOP	Related OS	Microsoft Windows7
Abstract	How to configure WebAccess WASCADA		
Keyword	WebAccess, WASCADA, SCADA		
Related Product	WebAccess all versions (after multi Modbus Servers available)		

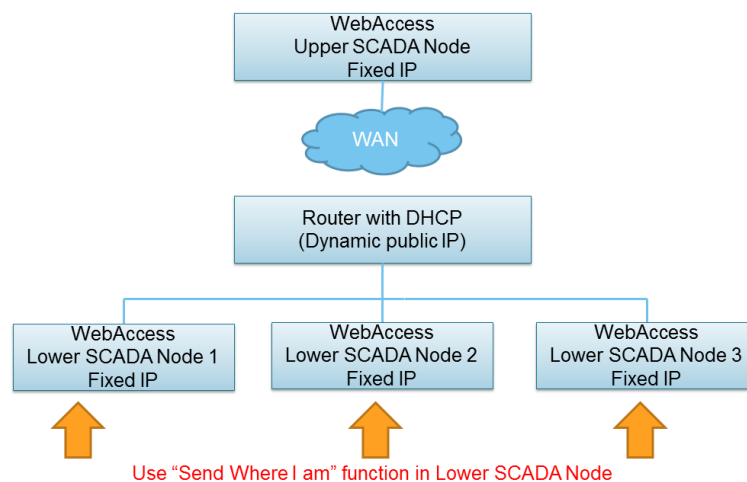
■ Description:

WASCADA architecture is used for doing data integration with multiple SCADA Nodes. User can read data from other SCADA Nodes through WASCADA Driver, consider the SCADA Node as a general device. Through WASCADA, users can do the central management, monitoring multiple SCADA Nodes that be distributed in all over the world at the same time, and also provides bolt continuingly function. Basic architecture is shown in Picture1.



Picture 1

This FAQ is also applied if only router has DHCP, as shown in Picture 2



Picture 2

If user doesn't use VPN network architecture area, it requires for the upper SCADA Node has public fixed IP.

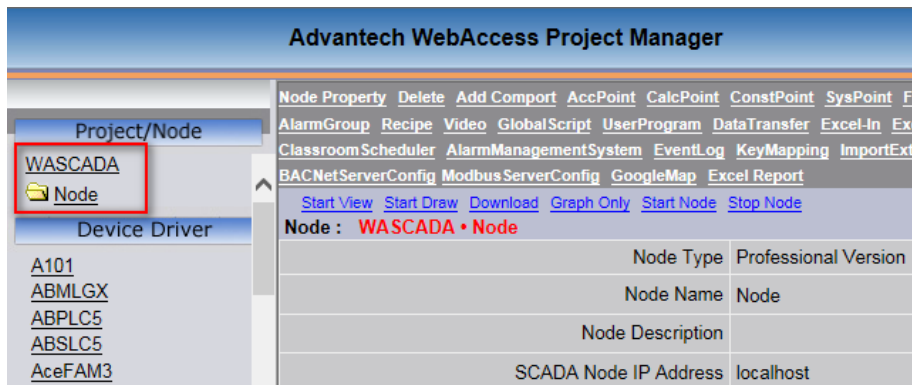
■ **Solution:**

1. User can prepare at least two computers (A and B) that have installed WebAccess and have project to use. First of all, make sure the two computers are in the same domain, can 'ping' each other, and confirm the port 80, 4592 and 14592 are opened.

Structure:

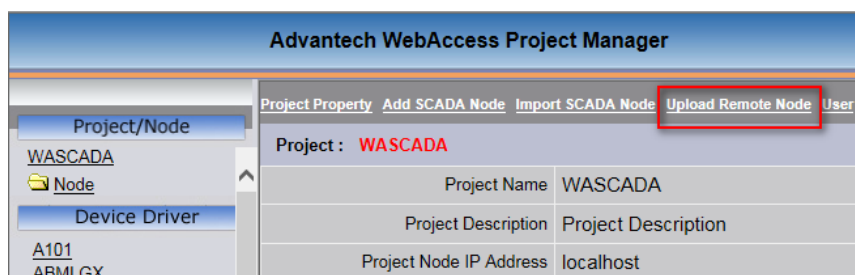
Computer A (WASCADA; 172.18.3.30) --- TCP/IP --- Computer B (Lower SCADA Node; 172.18.3.36)

2. Login to Project Manager in **Computer A**, add a Project Node named 'WASCADA' and a SCADA Node named 'Node', as shown in Picture 3.



Picture 3

3. Select Project Node from the Project Tree at left hand site, and select 'Upload Remote Node', as shown in Picture 4.



Picture 4

4. Enter the page of Upload Remote Node, enter the IP of **Computer B**, take 172.18.3.36 for example, as shown in Picture 5.

The screenshot shows the 'Upload Remote Node' form. The 'Project Node IP Address' field is filled with '172.18.3.36'. The 'Project Primary TCP Port' is '0'. The 'Project Timeout' is '0'. The 'Remote Access Code' is empty. The 'Modbus Listening Port' is '0'. The 'Upload Options' section includes checkboxes for 'All Tags', 'Only Alarm Tags', 'Include Alarm Group', 'Upload Real Trend Group', 'Upload Data Log Trend Group', 'Independent alarm', 'Synchronize alarm and Alarm log', 'Independent Point Property', 'Synchronize Point Property', and 'Sync Datalog Trend'. The 'Target Node Start Group No.' is '1'.

Picture 5

- Enter IP address or URL of remote Project Node.
 - Enter Project Primary TCP Port of remote project.
 - Enter Remote Access Code of remote project.
- Note - A Remote Access Code prevents unauthorized users copy user's SCADA node*
- The Upload Options are for synchronization of data and Alarm log, user can check them according to user's project requirement.
 - Sync Datalog Trend is the bolts continuingly function. If user checks it, when the communication between the upper node and lower node is fail, the lower node will save historical data in local. After the communication back, the upper node data will be auto-completion.

5. An ASP Page appears listing SCADA Nodes in the remote project, as shown in Picture 6.

Upload Remote Node(All Tags) [Cancel] [Submit]				
Source Project Node IP Address		Target Project Node IP Address		
172.18.3.36		localhost		
Source Project Name	Source Node Name	Target Project Node Name	Target Node Name	TagName Prefix
APAXtest	<input type="radio"/> Node			
CalculationDEMO	<input type="radio"/> Node			
Express	<input type="radio"/> SCADA			
LiviaProject	<input type="radio"/> EventTestP			
LiviaProject	<input checked="" type="radio"/> Node			
LiviaProject	<input type="radio"/> Node1			
LiviaProject	<input type="radio"/> Node3			
LiviaProject	<input type="radio"/> PNode			
LiviaProject	<input type="radio"/> RedundantNode			
LiviaProject	<input type="radio"/> VideoTestPC			
LiviaRedunPro	<input type="radio"/> SCADANode1			
ODBC	<input type="radio"/> Node			
ODBC	<input type="radio"/> Node1			
OPCTest	<input type="radio"/> Node			
SUSitest	<input type="radio"/> node			
WASCADA	<input type="radio"/> Node	WASCADA	<input type="text" value="Node"/>	<input type="text"/>

[Cancel] [Submit]

Picture 6

The left side is the project list in computer B, the right side is the project list in computer A, user can choose which project user wants to upload, and which project node user wants to receive the remote project, and user can add tag name prefix, but the length of tag name must be less than 21 characters, so don't enter too long prefix, otherwise the upload will fail.

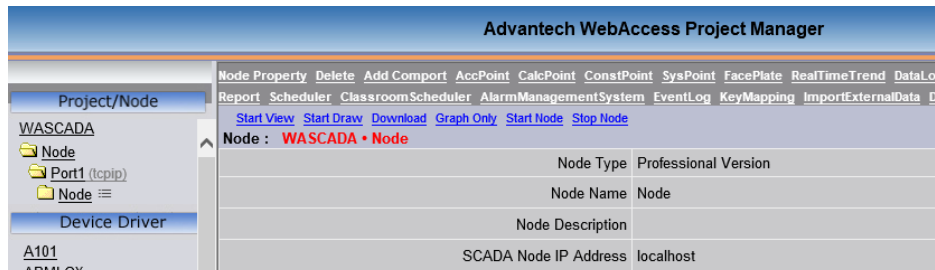
6. After upload successfully, WebAccess will show the result as in Picture 7

Upload Remote Node Successfully				
Source Project Node IP Address		Target Project Node IP Address		
172.18.3.36		localhost		
Source Project Name	Source Node Name	Target Project Node Name	Target Node Name	Status
LiviaProject	Node	WASCADA	Node	✓

OK

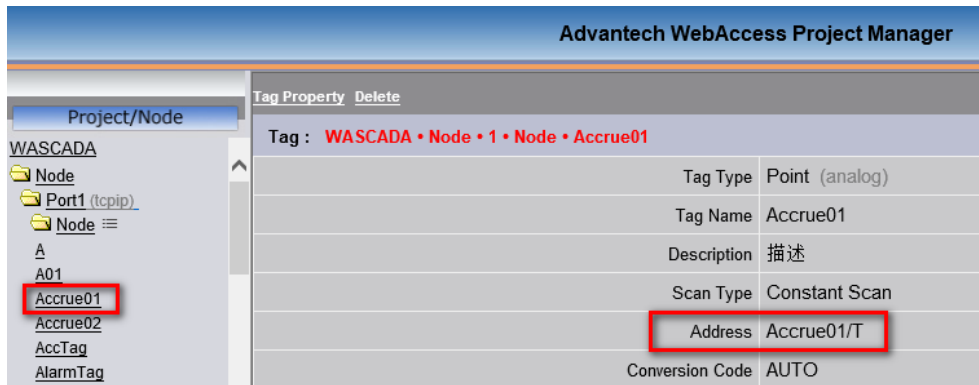
Picture 7

- Click 'OK' in Picture 7, and it will be back to SCADA Node. User will see the new device in the project tree at left hand site, as shown in Picture 8.



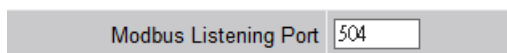
Picture 8

- The device name is the remote SCADA Node name, under the device, user can see all tags that be uploaded. The address of every tag is the tag name of the lower SCADA Node, '/T' means it has bolt continuingly function, as shown in Picture 9.



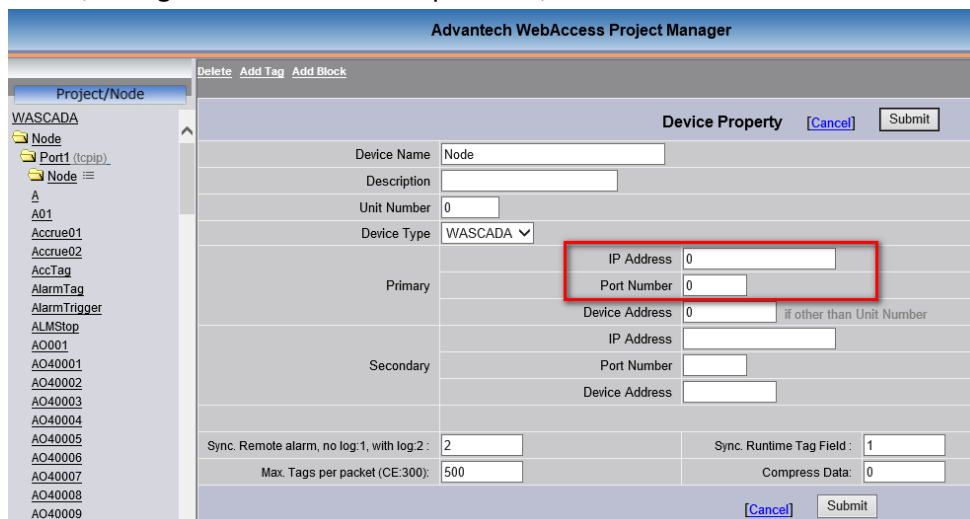
Picture 9

- After uploading the remote node, **user has to configure both SCADA Node and communication mode**. In the computer A, click SCADA Node property and modify "Modbus Listening Port" to 504, as shown in Picture 10



Picture 10

- Click the Device 'Node', change the IP Address and port to 0, as shown in Picture 11.



Picture 11

11. In the Computer B, enter the SCADA Node properties; configure the four items, as shown in Picture 12.

Send Where I Am To IP Address	172.18.3.30	(IP1;IP2)
Send Where I Am To Port	504	(Port1;Port2)
Send Where I Am Every	10	(Frequency1;Frequency2) Seconds

Picture 12

- **Send Where I Am To IP Address** - Enter the fixed IP address of the upper SCADA Node. E.g. 172.18.3.30
- **Send Where I Am To Port** - 504
- **Send Where I Am Every** - the interval of update data, E.g. 10

12. Start the kernel of the both WASCADA (Computer A) and Lower SCADA Node (Computer B) at the same time, and user can see the data in the upper SCADA Node -> View/ViewDAQ -> Point Info

13. If user runs DSPOOL.exe (c:\WebAccess\node) in WASCADA, he will be able to find SCADA Node IP Address / Router IP Address in it. This means the connection of port 504 between WASCADA (Computer A) and Lower SCADA Node (Computer B) is successful. As show in Picture 13.

```
Accept 1 220 220 98 connection c
Client IP is 172.18.3.36
newConnection {{CH = 8636548 }}.
```

Picture 13

Note:

1. Except automatically upload, user can also add SCADA Node manually, just make the SCADA Node as a device, named it the lower SCADA Node name, choose Device type 'WASCADA', add tags named by the tag name of the lower SCADA Node.
2. When user has to upload multiple SCADA Nodes to the same Super SCADA, please give all Lower SCADA Nodes different SCADA Node names.
3. WebAccess Super SCADA uses Modbus TCP as protocol. Super SCADA acts as Modbus Server and Lower SCADA Node acts as Modbus client. For testing, user may use Modscan to connect Super SCADA port 504 and check whether data is readable or not.
4. **Port "504" in not the only possible port** and user may freely to modify it.
Please note "Modbus Listening Port" in Upper SCADA Node and "Send Where I Am To Port" in Lower SCADA Node must be matched.

- Upper SCADA Node -> SCADA Node property -> Modbus Listening Port:

Modbus Listening Port	504
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- Lower SCADA Node -> SCADA Node Property -> Send Where I am To Port:

Send Where I Am To Port	504	(Port1;Port2)
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